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THE MISSING VOICE: ARCHIVISTS AND INFRASTRUCTURES FOR HUMANITIES RESEARCH

RETO SPECK AND PETRA LINKS

Abstract *This article offers a critique of the transfer of a technological-scientific paradigm of research infrastructure to the field of the humanities. This critique is informed by our experience of formulating user requirements for the European Holocaust Research Infrastructure (EHRI) project, and especially by a series of interviews we undertook with user-facing archivists working at EHRI partner institutions. We argue that the archival voices we recovered during these interviews articulate a range of concerns that clash with some of the major assumptions which frame current discussions about research infrastructure. In particular, we demonstrate that archival research is currently heavily mediated by archivists. And yet, inter-mediation is a theme that is insufficiently explored in recent theorising about research infrastructure. Contextualising our findings within some recent trends in archival science, we show that an infrastructure such as the EHRI must be built around the complex relationship between scholar, archivist and archive. We conclude by indicating how building infrastructures for humanities research may enable us to fruitfully re-conceptualise and re-energise this relationship by transposing it from the physical world to digital environments.*

INTRODUCTION

Infrastructure for humanities research has something of a reputation. Its pedigree in the domains of science and engineering, and the propensity of its advocates to transfer the values of 'faster, bigger and better' from these fields to new and intellectually and culturally very different ones, has led to much

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soul-searching and debate about large-scale infrastructure building in the humanities. These debates are fuelled by a set of interrelated questions about the nature of the relationship between the humanities and the sciences, and especially the appropriateness of the transfer of the e-science paradigm with its focus on quantification, big data, big structures and big research questions to the context of humanities research.¹

In this article we will contend that a strong bind between humanities research infrastructures and the big sciences is not always helpful. We will develop our case by reflecting on our experience of formulating user requirements for the European Holocaust Research Infrastructure (EHRI) project. In particular, we will report on preliminary results from a series of interviews we held with user-facing staff working at collection holding institutions that are participating in the EHRI project.² The archival voice we thus recovered is crucial to construct an infrastructure that is fit for its intended purpose. However, we will also show that this voice has so far struggled to assert itself against the quasi-scientific paradigm that currently frames much of the discussion about infrastructure development in the humanities.

Our claim is that the relationship that really matters when conceptualising an infrastructure such as the EHRI is not the abstract one between the sciences and the humanities, but the concrete one between scholars, archivists and archives. Therefore, we urgently need to investigate what happens to this complex interaction if it is played out in the digital rather than physical realm. This article is a first tentative step towards such an investigation: it illustrates a problem, rather than offering a solution.

We will arrive at this claim by contextualising the results from our interviews within two bodies of literature: studies concerned with research infrastructure and archival science. We start with a short account of the development of the idea of research infrastructure, initially within the fields of science and engineering and later in the humanities. This initial account provides the vital backdrop to a presentation of results from our interviews in the second section. We will see that there exists a significant disjunction between some of the assumptions commonly encountered in discussions about research infrastructure and the concerns articulated by our interviewees. A third section is devoted to a brief outline of studies concerned with the digital turn in the archival sciences. We will highlight a number of current developments within this field that may help us to think through the concerns that were highlighted in our interviews, and that need to be addressed when building an infrastructure such as the EHRI.

A (VERY) SHORT GENEALOGY OF RESEARCH INFRASTRUCTURES

We cannot comprehensively analyse the origin and development of the concept of research infrastructure here. Rather, the purpose of this section is to locate one

of its important points of origin in the fields of science and engineering; to briefly explore how the concept has been transferred to the field of the humanities; and, finally, to highlight the role the archivist is perceived to play in either context.

Historically, research infrastructures seem to have come into being concurrently with the first consolidation of philosophy, with the peripatetic inspired library of Alexandria frequently invoked as the first infrastructure of scholarship.³ However, when it comes to conceptions of new digital infrastructures, very little is made of this classical heritage or indeed any history of the human mind or scholarship. Rather, two alternative points of departures close to the present tend to be emphasised: the advent of big sciences, and the revolution in digital technology.

The publication of the 2003 report *Revolutionizing Science and Engineering through Cyberinfrastructure* by Daniel E. Atkins for the US National Science Foundation is often seen as a pivotal moment for galvanising development of large-scale digital research infrastructures – or cyberinfrastructures as they are commonly known in US parlance.⁴ According to Atkins, research infrastructures will lead to nothing less than a revolutionary transformation of the sciences and engineering, and his report elaborates the contours of this new age in vivid colours.⁵ Ever more data, analysed with the help of increasingly sophisticated algorithms, running on progressively more powerful computing systems will inform the work of interdisciplinary teams of highly specialised experts that will ultimately lead us to answers to the big questions of science: ensuring human health, understanding the formation of the universe, explaining the essence of matter, and so on.⁶ As utopian visions go, it takes some beating!

Unsurprisingly, archives and archivists do not play much of a role in this vision – unsurprisingly, because the report is exclusively geared towards the sciences and engineering whose primary research sources are in the main not under the stewardship of archives.⁷ What is arguably more surprising is the considerable extent to which literature concerned with research infrastructures for the humanities take on Atkins' vision of the future of scientific research, and, partially as a consequence, underplay the role archivists will play in this future.

A good example for this phenomenon is *Our Cultural Commonwealth*, a report composed by a commission of the American Council of Learned Societies to guide humanities infrastructure development in the United States.⁸ It begins by indicating that the infrastructure of humanities scholarship has been built up over centuries. The authors duly note that this traditional infrastructure is principally composed of primary sources lodged in libraries, archives and museums, and that librarians, archivists and museum curators are vital to mediate scholarly access to these materials. The next paragraph, however, rather abruptly introduces the Atkins' report, and takes over many of the characteristics of infrastructure outlined therein.⁹

Much of *Our Cultural Commonwealth* is devoted to outlining how Atkins' prediction is transferable to the humanities, that is to say how an infrastructure that harnesses newfangled computer-assisted analytical methods on ever increasing amounts of cultural data can lead to fundamentally new insights into the human condition.¹⁰ Underlying this is the grand vision of the complete digitisation and virtual unification of the cultural record, and universal access to this record.¹¹

Of course, important differences between humanities and science research are recognised in the report. For instance, the complex, situated and ephemeral nature of the cultural record is acknowledged, as is the fact that the sources comprising this record are not only of interest to specialised experts but to society at large.¹² Hand-in-hand with the recognition of such differences are nods towards the significant role that librarians, archivists and museum curators will have to play if the vision of *Our Cultural Commonwealth* is to be realised. And yet, on closer inspection, this role turns out to be limited: cultural heritage institutions are first of all seen as providers of the material that will form the backbone of the universal library, and secondly, as experts in the management and preservation of this material.¹³ However, the role that these institutions play in directly mediating access to such material is not discussed: it would appear that the new research infrastructures will offer seamless, universal and immediate access to our cultural record, with little discussion of what will happen to the current gatekeepers.¹⁴

Our Cultural Commonwealth has found many echoes in current accounts of infrastructure development in the humanities. Gregory Crane et al., Christine Borgman, and Sheila Anderson and Tobias Blanke, for instance, have all recently argued that the experience of infrastructure building in the sciences provides key lessons for similar developments in the humanities.¹⁵ They have also reiterated some of the commitments that underlie this science derived model such as the importance of big data,¹⁶ high performance computing,¹⁷ and alignment of research preoccupations in order to address shared challenges.¹⁸ Archives and archivists again do not figure significantly in these accounts.

However, this does not mean that the scientific influence is all-pervasive in current discussions. All authors mentioned above note some distinctive features of humanities research.¹⁹ In addition, some direct challenges to the imposition of a quasi-scientific model of infrastructure on humanities research exist: Andrew Prescott, for instance, juxtaposing the 'sequacious' nature of scientific data to the messy, ambiguous and complex artefacts of humanities scholarship questions the appropriateness of science-inspired structures and methods for humanities research.²⁰ In a similar fashion, Joris van Zundert reminds us of the complexity and idiosyncrasy of humanities sources and research questions and challenges the idea that big infrastructures could ever cater for these;²¹ and Patrik Svensson, finally, advocates the replacement of the current

science-and-engineering paradigm of cyberinfrastructure by the development of truly humanities-based models.²²

Crucially, some have recognised that infrastructure building for the humanities can only succeed if it is facilitated by close collaboration between scholars and archivists. Bucking the trend of regarding infrastructure building as primarily an opportunity of rapprochement with the sciences, Roy Rosenzweig sees its distinct potential in opening up an avenue for re-invigorating the traditionally strong ties between scholars and archivists and librarians – ties that have become weakened since the Second World War.²³ Likewise, whereas Amy Friedlander's recent piece starts by invoking the ideal of the big sciences structured around big data and big research questions, she concludes on a very different note.²⁴ Indeed, she suggests that new infrastructures may principally be of benefit to scholarship by helping to uncover previously hidden archival collections; an outcome that not only requires leveraging archivists' strengths in preservation and collection management, but also in providing expert reference services.²⁵

In the remainder of this article, we want to reinforce the messages of Rosenzweig and Friedlander. Our experience in the EHRI project suggests that whatever the exact nature of the tri-party relationship between infrastructure, sciences and humanities, the constellation that urgently requires investigation is the one between scholars, archivists and archives. Only if we manage to afford the voice of the archivist a prominent place in our thinking about infrastructure development, can we make the most of the opportunities that a project like the EHRI has to offer.

RECOVERING THE ARCHIVISTS' VOICE FOR THE EHRI

Background and Methodology

The object of the EHRI project is to facilitate research into the Holocaust by constructing an infrastructure that virtually integrates descriptions of relevant archival sources hitherto physically dispersed across the globe, and by providing tools that allow for exploration of these sources.²⁶ It is a collaborative effort bringing together archivists, historians and e-researchers.

Though archives and archivists thus stand at the project's very heart, it is nevertheless true that the relative neglect of the archival voice in the discourse about research infrastructure is to an extent mirrored in its original design. In fact, the project's user requirement work, to which the authors are contributing, was originally conceived as consisting of eliciting requirements from active Holocaust researchers to be passed on to the e-researchers in charge of building the infrastructure. The archivists' role in this process was restricted to providing information: we had hoped that EHRI partner archives would provide us with statistical information about their readers' information seeking behaviour. The

idea was to analyse this data to increase our understanding of how researchers currently find archival material.²⁷

It was only when our call for such statistics resulted in limited information that archivists gained a more prominent voice in our work. Indeed, in order to compensate for the shortfall in quantitative reader information, we decided to organise a series of interviews with archivists working at EHRI archival partner institutions. We selected thirteen of the twenty EHRI partners to participate in the interview series. We invited all selected institutions to nominate one or several members of their staff that have experience of directly dealing with researchers as potential interviewees. Overall, eight institutions responded to our call and we interviewed a total of twenty persons in eight sessions.²⁸ Interviews were semi-structured around five themes and lasted between fifty and eighty minutes.²⁹ Seven interviews were held in person, and one via Skype. All interviews were digitally recorded, and then transcribed and encoded in the Nvivo software suite.

The focus of these interviews was again on the researcher rather than the archivist: we endeavoured to find out what archivists think historians are doing when visiting their reading rooms. And yet, when conducting the interviews it soon became evident that the archivists' perspective on current research practices and on the challenges of building an infrastructure for Holocaust research is valuable not only in relation to researchers but also *sui generis*. In particular, the archivists' voices we encountered challenge some of the science-cum-engineering derived assumptions about the purpose and mechanics of research and its supporting infrastructures, thereby leading us to a rich description of some of the particularities of current archival research.

It should be noted that this article presents the views of archivists on the scholarly research process and what archivists think scholars need when conducting archival research. When formulating user requirements for an infrastructure such as the EHRI, it is of course crucial to compare and contrast such views with the ones of Holocaust scholars. For the purpose of this article, however, with its aim of amplifying the hitherto muted archival voice in discussions about research infrastructures, an exclusive focus on the archival point-of-view is justified.

Complicated Institutions

One feature of the interviews is the frequent comparisons respondents draw between their own policies, practices and services and those of related institutions. This is a consequence of the fact that Holocaust-related archival institutions vary greatly: some have primarily an archival mission, the archives of others are first and foremost supporting a museum, a memorial, a library or a research division. Some focus specifically on the Holocaust and have a history that its irrevocably entangled with the Second World War and its immediate

aftermath and/or the history of the Jewish people, others have different origins and other remits; some are primarily geared towards scholarly use, others have a much broader audience, and so on. The idea of the 'Holocaust-related archival institution', in other words, is an abstract one, encompassing a variety of institutions with complicated and diverging purposes, histories, and cultures.

Crucially, such differences have a substantive effect on research. Since Holocaust research typically involves work in multiple archives, and since no two archives are alike, scholars need to painstakingly learn to operate in different settings. Interviewees from three archives explicitly note that to successfully do research at their institutions, scholars first need to learn about its particularities. A precondition to the study of the Holocaust, it would appear, is a historical and cultural study of institutions that hold its archival record. One of our respondents noted that readers who do not have at least a preliminary understanding of her institution's specific history, mission and structure are highly unlikely to be able to successfully locate material relevant to their research topics.

Some of our interviewees freely admit that the necessary learning process about their respective institution can be time-consuming. One respondent acknowledges that she herself struggles to find her way around a certain archive even though it is geographically and thematically very close to her own; whereas another agrees that 'it must be hard' for scholars to come to his reading room for the first time, given that 'it is complicated' even for him as an archival specialist to work in other archives. A third interviewee provides a neat summary of the problem:

Yes, I mean, if I remember . . . it takes, really, at least two years to get your head round all the sections that we have, and the way you look for stuff over those, I don't know, six maybe, collections, or search tools, the way you look for stuff is so different.

Search Tools and Hidden Collections

As the above quote indicates, the problem of differences between archives is compounded by heterogeneous search tools available within institutions. Only one respondent, working in an archive that possesses an overarching union catalogue across all their different collections, explicitly states that, overall, their search and retrieval systems are transparent and easy to use. More prominent is the following sentiment expressed in response to the question of what new tools could assist researchers most in their work:

I think it's . . . to look through [all] the archives. That is always a problem. Like I said, there is no basic search possibilities through all the archives. That's the most simple thing [we could do to improve things] I think.

Apart from lacking integration of search tools, one common problem researchers face across the surveyed archives is the problem of how to translate their research themes and subjects into archival collections, typically organised according to provenance.³⁰ Indeed, despite the fact that all institutions offer some thematic keywords to at least parts of their collections, all bar one echo the following sentiment:

So they [i.e. readers] don't differentiate necessarily between the different finding aids and then it's all one. We think of the [archive] as different collections; they think of the [archive] as different subjects.

Keywords of course go a long way toward solving this problem; but they are not used by all the surveyed institutions, and several respondents stress that they are by no means a panacea. It is impossible to assign keywords to everything and to anticipate every possible current and future research preoccupation. Moreover, summary keywords on the aggregation level may not be granular enough to accommodate all research needs.³¹ This is particularly important to bear in mind given the fragmented and dynamic nature of historical research. One respondent illustrates the problem with a historic reference:

No. No, they [i.e. researchers] will need some help. .. [How much] really depends on what the question is. Because if it's a question that's more conventional, then frequently they can find the material themselves. If they have a question that has not been, that is a little less conventional ...

Look, a very classic example of this, and this is an example from 20 years ago, almost 20 years ago. In the mid-90s, gender studies was very new. And we started getting people coming here interested in gender studies and in particular things about women, and our cataloguers hadn't really put that in – I mean, nowadays we do, but at the time, we hadn't put them in the ... keyword[s]. It wasn't a major keyword.

In order to grapple with the problems of complex, heterogeneous and fragmented search tools and finding aids researchers need to devise very sophisticated and, crucially, institution specific search strategies. But to make matters worse, many collections cannot be found even if the most sophisticated search strategies are employed; or, as put by one of our respondents:

But of course we'll also inform him [i.e. a new reader] about newer things ... and about cross connections ... you can of course give keywords to everything, but the best finding aid is still the head of the archivist!

One of the major reasons why the 'head of the archivist' continues to be indispensable for Holocaust research is the problem of 'hidden collections' – a

problem mentioned by all interviewees for different reasons: privacy restrictions, un-catalogued material and language.

Privacy: All institutions but one have collections with access restrictions due to privacy concerns. As published finding aids will not lead to such collections, asking the archivist whether collections with special access arrangement pertaining to a particular theme and/or individual exist is often the only way to acquire knowledge of the existence of potentially useful, but restricted, material.

Un-catalogued: More than half of the surveyed institutions report backlogs that result in collections that are either not catalogued at all, or only catalogued at such a generic level that discovery of specific material within the collection is difficult. Again our respondents note that talking to the archivist is the only way out of this impasse.

Language: Differences in the language of description to the language of the described sources can lead to the situation where collections remain hidden from researchers for purely linguistic reasons. Our interviews suggest that this situation is very common in the context of the widely dispersed Holocaust sources. Indeed, interviewees from four institutions explicitly flag this as an important issue, with three institutions offering some translations of either selected sources and/or descriptions to partially alleviate the problem.

Additionally, several interviewees drew our attention to potentially significant bodies of hidden collections hosted outside their own institutions. Frequently invoked in this respect are archives located in some of the successor states of the Soviet Union which are likely to host important Holocaust related collections, but which remain hidden both because of lacking description and because of difficult access. One respondent, furthermore, voiced a suspicion that interesting source material may be found in small archives possessing limited visibility, simply because these archives have traditionally not been regarded as being part of the Holocaust-related archival landscape:

And then there certainly still are new areas to look at. For instance, Jewish forced labour in agriculture, why not look at the archives of the aristocracy? Maybe, somewhere, there still is something? Well, this kind of thing must not be excluded.

The information we have gathered indicates that the fundamental problem scholars currently face when undertaking archival research into the Holocaust is not to detect new patterns in masses of information, but to detect nuggets of information hitherto ignored, overlooked or underappreciated. They are not primarily faced by a data deluge that can be solved by big data solutions, but by insufficient information about the extant dispersed, limited, fragmentary and complicated Holocaust-related sources, as well as the institutions holding these sources.

As a consequence, archivists currently provide an important role in mediating between researchers and their sources. In the context of the complex nature of Holocaust-related archives and their collections all our respondents are convinced that in the absence of such mediation a lot of current research activity would become very complicated or even impossible. Two of our interviewees summarise this state of affairs particularly cogently:

And archives are not [like] a library. In a library you have a title, you have an author or an editor ... but an archive is a rubbish heap ... and only we have the map [to navigate it].

It's not that we say that [our readers] are not professional enough [to find their sources themselves]. Nobody can ... they don't know how to work with our inventories or the card systems. That's the problem. And only the ... real professionals, and that's me or my colleagues, know how it works.

Patterns of Archival Mediation

All the surveyed institutions currently offer various advice and reference services to help their readers to chart their ways through their complex collections. Naturally, given these institutions' heterogeneous nature, the scope and extent of the offered services also differ. For instance, whereas one institution answers approximately 20,000 reader email queries a year, another one estimates the same figure to be in the region of 250. Whatever such differences, however, all institutions regard providing such services as a central part of their mission.

Of course, archives currently receive very different kinds of queries. At one end of the spectrum are large quantities of generic enquiries that require very minimal effort. In fact, two interviewees indicate that a large amount of queries can be solved by pointing the enquirer to the correct page of their institution's website, while three are convinced that the number of straightforward enquiries could be cut if more relevant information about their institution and their collections was easily accessible online.

At the other end, however, stand very complex, detailed and specific enquiries and it is noteworthy how much effort the surveyed institutions invest to deal with these. One interviewee, for instance, states that he has spent up to two weeks with one specific query; an effort that included detailed consultation with colleagues in different departments of his institution to bring together all the expertise needed to fully answer the reader's question. Likewise, two institutions report that they offer all first-time visitors individual consultations with the aim of tailoring their advice to the specific needs of the research project in question.

Interviewees from three archives mention that they frequently seek to encourage researchers to widen their searches and to consider using additional material outside their original purview in the course of such expert consultation. Using their knowledge of the collections available at their own institutions and the insufficient state of their description, they seek to open up research possibilities that their readers could not have recognised themselves if they had solely relied on published finding aids.

Apart from guiding their readers' through their own holdings, interviewees from seven of the surveyed institutions see it as a part of their work to draw researchers' attention to relevant collections in other archives. There is a sense among our respondents that a significant proportion of their readers may not be fully aware of the extent of the dispersal and fragmentation of Holocaust collections. As a consequence they currently play a crucial role in outlining the limitations of their own holdings, and to direct their readers towards other institutions where further relevant material may be found.

By getting very closely involved in their readers' research, some of our interviewees blur the line between the archivist and the researcher, and thereby enter potentially fraught territory. One respondent feels that some of his readers are too confident in their own knowledge and may react badly to well-meant advice. Noting that a small minority respond to his help with comments along the lines of 'I am a great researcher, I am the historian, you are just an archivist,' he nonetheless feels that it is his job as an archivist to guide the historian – indeed, his strategy to deal with such readers is 'to listen carefully to recognise those cases and then gently point them into the right direction anyway'.

Judging from our interviews, 'to gently point researchers into the right direction' is one of the key roles archivists of Holocaust related collections currently perform. And there is no question in our mind that this role needs to be considered when conceptualising a research infrastructure such as the EHRI. Given that the mediating and networking archivist occupies a central position in current Holocaust research, the aim of the EHRI project – to facilitate new scholarship into the Holocaust – cannot be reached if no attempt is made to model such mediation and networking within the infrastructure.

This is of course not to say that we should just replicate the kind of advice and guidance services that archivists currently provide within the EHRI. In fact, the field of archival reference is in a state of flux, not least because of the establishment of digital research infrastructures. As we have seen, lurking behind many of the current queries are insufficient descriptions of archival material and lacking inter- and intra-institutional integration of existing descriptions. Current endeavours by both individual archives and by projects such as EHRI to increase both the quantity and the quality of online descriptions and to virtually integrate cataloguing systems may ultimately result in many of the current queries simply resolving themselves.

Nevertheless, it would clearly be naïve to suppose that enhanced integration and online availability of archival catalogues will render obsolete the expert advice which archivists currently provide. On the contrary, there are good reasons to suppose that the recent experience of one of our interviewees will hold true in the near future:

We are answering less questions, but much more complicated ones. It's because the people who come to us usually already have much more complicated questions, because the simple questions they can answer themselves. There are questions—we used to answer questions that now most people are answering from Wikipedia, to be frank.... So frequently ... the questions that our experts have to answer are much more complex.

The quote points to the most general conclusion we arguably can derive from our series of interviews: our interlocutors invariably remind us that what needs our attention is the question of how a digital research infrastructure can facilitate the interaction between archivists and researchers negotiating complex problems. As we have seen, this question is not adequately addressed in current literature on research infrastructure. And yet, if we turn our attention to the field of archival science, we can find some tentative attempts to tease out the implications of recent technological change on the question of archival mediation and the nature of the relationship between archivists and researchers. The next section will contain a broad and selective overview of some recent developments in this respect, which add important context to the findings of our interviews.

A (VERY) SHORT HISTORIOGRAPHICAL OVERVIEW OF RELATED DISCUSSIONS IN ARCHIVAL SCIENCE

Archival science has undergone a significant transformation over the last three decades, partly as a response to a series of technological developments, often collectively termed the 'digital turn'.³² In a first period, roughly spanning the 1980s and the 1990s, the question of standardisation received most attention,³³ but by the beginning of the twenty-first century it had become evident that the promise of improved digital access to standardised archival descriptions can only be realised if technological developments are matched by an increased understanding of the information-seeking behaviour of readers. Scholars such as Ian G. Anderson, Helen Tibbo, Anne J. Gilliland-Swetland, Elizabeth Yakel and Wendy Duff have produced a series of user studies that chart the search strategies of different archival readers in order to influence system designs and metadata structures.³⁴

For our present concerns, the most important outcome of such efforts was a renewed recognition of the central role the archivist plays in the research process.

A survey carried out by Duff, Barbara Craig and Joan Cherry among Canadian historians shows that historians rate archivists very highly as sources to locate information relevant to their research.³⁵ In a related study, Catherine Johnson and Duff conclude that ‘chatting up the archivist’ is a key strategy for historians to successfully undertake archival research.³⁶ In some ways these findings of the early 2000s should not have come as a surprise. Archival theorists had long been aware of the crucial role the reference archivist plays in the research process, with Mary Pugh for instance criticising in 1982 the idea of an ‘immortal, omniscient, indispensable reference archivist’, widely assumed to stand at the very heart of the archival system.³⁷

The reference archivist is supposed to be the specialist who guides the researcher with a subject oriented question to relevant sources by means of finding aids that are provenance based. Though this role should not be romanticised, since it is not possible for an archivist to remember all administrative histories,³⁸ Johnson and Duff identify specific fields of expertise of archivists that historians particularly value that match closely some of our findings above: knowledge of the scope, content and provenance of archival records, the record-keeping systems that produced them and an ability to explain how archival information systems work. Historians also appreciate information about records that are not yet described in published finding aids or records that are maintained at other institutions.³⁹

Whereas the important role archivists play in helping scholars to retrieve archival sources has long been recognised, the question of how the digital turn will influence the reference role of the archivist has received less attention: is there still a need for this role in an age where archival information is increasingly integrated in virtual research environments nationally and internationally, and where institutional borders are fading away? And if so, how should this role be reflected in virtual space? Even though archival theory is still struggling with these questions, some current developments are illuminating for our present concerns.

Several scenarios have been drawn up, varying from the disappearance of the reference function of the archivist to the virtual transformation of this function both in the context of their own institution and beyond institutional and geographical boundaries. While differences in accentuation exist, a clear consensus is emerging that expert archivists will continue to play vital roles in the digital age, especially in regard to access mediation.⁴⁰ Duff and Fox, for instance, stress the importance of reference archivists in virtual settings in order to answer specific reference questions and to help remote users with the navigation of online search and retrieval systems.⁴¹ Moreover, it is expected that the complexity of questions put to archivists in virtual environments will increase, and that improvements in finding aids and retrieval systems will allow archivists to provide richer assistance to researchers by digging more deeply into

more complex problems. Richard V. Szary expresses this expectation in words that very closely mirror the experience of one of our interviewees quoted above: 'In such a [digital] environment reference staff are likely to find their time and energies reserved for more esoteric and complex questions that even the best constructed finding aids may not be able to address, and for educating users in effective methods of discovering . . . primary source materials'.⁴²

In this shifting field of ideation on the future role of the archivist in online environments several scholars influenced by postmodern ideas plead for more than a virtualisation of the current mediation function of the archivist, and stress the need for archivists to share their expertise more broadly than by means of access mediation, and in more transparent and reflective manners. Margaret Hedstrom, for instance, emphasises the powerful position archivists have in selecting and describing records, and how they thereby influence historical knowledge without providing a transparent illustration of the choices they have made: 'I am urging archivists to become more conscious of power by declaring it and share it, however imperfectly, with each other and with current users and future generations'.⁴³

This vision of a more transparent role of the archivist in the digital age is also reflected in a recent study by Terry Cook. He shows how professional historians and archivists arose side by side in the nineteenth century, but have grown apart since. One reason for the current gulf is reflected in the idea among historians of an 'invisible or natural unproblematic archive', which ignores the mediated nature of archives as appraised and selected records. Cook argues that unlike librarians and museum curators, archivists have so far failed to fully articulate the ways by which they shape their holdings, thereby actively contributing to the gulf. Therefore, '[w]hat is missing', according to Cook, 'is the voice of the archivist, who, after all, is the principal actor in defining, choosing and constructing the archive that remains, and then in representing and presenting that surviving archival trace to researchers'.⁴⁴

Cook thus implies that archivists themselves must share some of the responsibility for the relative neglect of their voices in current discussions about the future of the archive and the archival profession in the digital age. The continuing commitment to a positivist paradigm that grew out of 19th-century scientific history among a section of the archival profession may well have tended to reinforce some of the messages we can also find in current discussions about humanities research infrastructures. What is for certain is that both have resulted in a relative neglect of the complicated, mediated and non-objective nature of the archive, its collections, and its gatekeepers.

And yet, far from reinforcing its positivist roots, archival science's digital turn has led to a flowering of investigations into the complex relationship between archivists, archives and historians, and to various calls to re-invigorate these

relations by putting them onto more transparent footings. Francis X. Blouin Jr. and William G. Rosenberg, for instance, share many of Cook's concerns in their recent call to bridge what they term the 'archival divide'. Recognising that historians no longer know what archivists do and how they influence what is recorded about our past, they believe that internet-based social network technologies offer a promising avenue to bridge the archival divide and to increase transparency in the process. They advocate the leveraging of Web 2.0 technologies to create a new generation of finding aids, collaboratively composed by historians and archivists, and existing parallel to the official archival descriptions. Thus, scholars and archivists could be brought back together: the former would get a much larger role in providing access to archives, and the latter would have to 'reengage with the scholarly interests of their users... and continue their traditional roles as research counsellors and guides'.⁴⁵

All this points towards a new archival paradigm in which archivists give up their role of lone experts and share the process of archiving with communities.⁴⁶ In the last decade several projects have been experimenting with incorporating such tighter collaboration between communities and archivists in online environments, and new models of interaction between historians and archivists have been proposed by invoking ideas such as the participatory archive or the archival commons.⁴⁷ Such ideas build upon joint description of archival holdings by means of community tagging and commentary. Even though this may to certain extent threaten the traditional role of archives as a trusted third party protecting the authenticity of records, it could also enrich accessibility to archives, help to overcome traditional constraints of archivists' time and expertise, and allow the description of collections from multiple points-of-views.⁴⁸ Maybe the most distinct definition of such a participatory archive has been put forward by Isto Huvila: 'The fundamental characteristics of the proposed approach are decentralised curation, radical user orientation, and contextualization of both records and the entire archival process'.⁴⁹ Even though the exact nature of the role of the archivist in the virtual age has not yet fully crystallised, we can thus clearly see emerging a shift from the invisible curator to active appraiser to societal mediator or even to a community facilitator.⁵⁰

CONCLUSION

The information we have assembled through our series of interviews certainly reinforces some of the recent trends in archival science. Indeed, our interviewees echo current theoretical concerns by powerfully articulating the importance of the relationship between the archivist and the scholar in current Holocaust

research. In the context of complicated, dispersed, fragmented and often imperfectly described sources, an exchange of expertise between archival specialist and scholar appears to stand close to the heart of the research enterprise. Moreover, while insisting on the centrality of their role, our interviewees also acknowledge, sometimes explicitly, sometimes implicitly, that the archival and research landscapes are changing and are likely to keep on changing for the foreseeable future. There exists a broad consensus that increasing amounts of archival material will be accessed online in the future, and that tighter integration of resources and activities will blur national and institutional boundaries. In many respects EHRI is but a powerful manifestation of this wider trend.

In this changing landscape the traditional mediating role of the archivist cannot remain stable, but neither will it disappear any time soon. Ideas taken from archival science such as the participatory archive are important because they allow us to re-conceptualise this role in the digital age. Such a re-conceptualisation may partly involve replicating what works best in the analogue world in digital environments. But it holds a bigger promise: it should also allow us to do things differently and solve old problems in new ways. In this respect maybe most important for a project such as EHRI would be to devise new means to bridge the 'archival divide' and to enable the diffusion of archival expertise and mediation in more transparent, pluralistic and collaborative ways than has hitherto been the case.

Various approaches and technologies including crowd/expert sourcing, user annotations of finding aids and social media tools for communication recommend themselves to achieve such aims. To specify in detail approaches that are suitable for EHRI will be the next step in our work. It is a step that follows naturally from our attempts to recover the missing voice of the archivist.

As seen, this recovery was necessary because EHRI arose on an intellectual terrain that has tended to downplay the importance of the mediating and networking archivist. Having evolved out of a scientific-technological paradigm, the idea of research infrastructures has directed our gaze towards quantification, big data, formal expert collaboration and so on, and, at times, has obscured a view on the particularities of archival research as it currently happens. While the image of a team of astrophysicists using the grid to process large quantities of highly structured data may no doubt inspire us when we contemplate research infrastructures, closer to home is the one of a reading room where archivists and historians discuss strategies of how to access the few remaining fragments of our past. If EHRI can help to ensure that this conversation keeps on evolving in the (digital) future in a transparent and inclusive environment, as well as sharpen our understanding of what happens if its protagonists are moved from the physical to the virtual realm, it has, we believe, achieved a great deal.

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END NOTES

- ¹ On this question, see, particularly, P Svensson, 'From optical fiber to conceptual cyberinfrastructure', *Digital Humanities Quarterly* 5 (2011), pars. 1–120.
- ² In the following we will avoid the awkward, if precise, expressions 'user-facing staff' and 'collection holding institution', and use the terms 'archivist' and 'archive' instead. Despite this usage, it should be borne in mind that some of our interviewees may not consider themselves to be 'archivists' in the strict sense of the word, nor, indeed, do all of them work at institutions that would label themselves as 'archives'. For a list of the institutions at which our interviewees work, see endnote 28 below.
- ³ See, for instance, European Science Foundation, 'Research infrastructures in the digital humanities', *Science Policy Briefing* 42 (2011), 1–43. Here especially at 3.
- ⁴ D. E. Atkins, K. K. Droegemeier, S. I. Feldman, H. Garcia-Molina et al., 'Revolutionizing science and engineering through cyberinfrastructure. Report of the National Science Foundation blue-ribbon advisory panel on cyberinfrastructure', (2003), 1–83.
- ⁵ Atkins et al., 'Revolutionizing science', 29.
- ⁶ Atkins et al., 'Revolutionizing science', passim.
- ⁷ See, C L. Borgman, 'The digital future is now: A call to action for the humanities', *Digital Humanities Quarterly* 3, no. 4 (2009), pars. 30–33.
- ⁸ J. Unsworth et al., 'Our cultural commonwealth. The report of the American Council of Learned Societies commission on cyberinfrastructure for the humanities and social sciences', (2006), 1–51.
- ⁹ Unsworth et al., 'Our cultural commonwealth', 6.
- ¹⁰ Unsworth et al., 'Our cultural commonwealth', 16–17.
- ¹¹ Unsworth et al., 'Our cultural commonwealth', 10–12.
- ¹² Unsworth et al., 'Our cultural commonwealth', 18, 40.
- ¹³ Unsworth et al., 'Our cultural commonwealth', 38–40.
- ¹⁴ On the bias against intermediation and local knowledge repositories in accounts of cyberinfrastructure, see A. Gold, 'Cyberinfrastructure, Data, and Libraries', *D-Lib Magazine* 13, no. 9/10, par. 1.8.
- ¹⁵ Borgman, 'The digital future'; S. Anderson and T. Blanke, 'Taking the long view: From e-Science humanities to humanities digital ecosystems', *Historical Social Research – Historische Sozialforschung* 37, no. 3 (2012), 147–164; G. Crane, A. Babeu, and D. Bamman, 'eScience and the humanities', *International Journal on Digital Libraries* 7, no. 1 (2007), 117–22.
- ¹⁶ Borgman, 'The digital future', pars. 23–24; Anderson and Blanke, 'Taking the long view', 153–4; Crane et al., 'Escience and the humanities', 117–8.
- ¹⁷ Anderson and Blanke, 'Taking the long view', 157–8.
- ¹⁸ Borgman, 'The digital future', par. 36.
- ¹⁹ Borgman, 'The digital future', pars. 31–3; Crane et al., 'Escience and the humanities', 118; Anderson and Blanke, 'Taking the Long View', 159–60.

- ²⁰ A. Prescott, 'An electric current of the imagination: what the digital humanities are and what they might become', public inaugural lecture, King's College London, (2012).
- ²¹ J. van Zundert, 'If you build it, will we come? Large scale digital infrastructures as a dead end for the digital humanities?', *Historical Social Research–Historische Sozialforschung* 37, no. 3 (2012), 165–85. Here especially at 184.
- ²² Svenson, 'From optical fiber', *passim*.
- ²³ R. Rosenzweig, 'Collaboration and the cyberinfrastructure: Academic collaboration with museums and libraries in the digital era', *First Monday* 12, no. 7 (2007). On the changing nature of the relationship between historians and archivists, see also F. X. Blouin and W. G. Rosenberg, *Processing the past: changing authorities in history and the archives* (Oxford, 2011).
- ²⁴ A. Friedlander, 'Head in the clouds and boots on the ground: Science, cyberinfrastructure and CLIR', *Council on Library and Information Resources* (2007), 1–11. Here especially at 3.
- ²⁵ Friedlander, 'Head in the clouds', 6–9.
- ²⁶ See <http://www.ehri-project.eu> for more details.
- ²⁷ Svensson advocates such a researcher centric approach to user requirement gathering for humanities infrastructure building. He sees it as crucial in order to overcome the scientific bias evident in current infrastructure discourse, and to capture a truly humanities model of scholarship instead. For similar reasons, he is critical of involving librarians (and presumably other curators of information such as archivists) in the process of designing humanities research infrastructure. However, our experience suggests that listening to archivists is essential to successful specification work in order to flesh out some of the distinct characteristics of humanities research. See Svensson, 'From optical fiber', par. 26–29.
- ²⁸ We held one interview session with each institution that participated. Participating institutions nominated between one and five respondents. The eight institutions that participated in the series are: Ceges-SOMA Centre for Historical Research and Documentation on War and Contemporary Society (Brussels, Belgium); Institute for Contemporary History (Munich, Germany); International Tracing Service (Bad Arolsen, Germany); Jewish Museum (Prague, Czech Republic); NIOD Institute for War Holocaust and Genocide Studies (Amsterdam, The Netherlands); Yad Vashem (Jerusalem, Israel); The Emanuel Ringelblum Jewish Historical Institute (Warsaw, Poland); The Wiener Library for the Study of Holocaust & Genocide (London, UK).
- ²⁹ These themes were: 1. Information about readers; 2. Collections and finding aids; 3. Support services; 4. Reader behaviour and interaction with support services; 5. EHRI and digital innovation.
- ³⁰ On the principle of provenance, see P. Horsman, 'Taming the elephant: An orthodox approach to the principal of provenance' in K. Abukhanfusa and J. Sybeck (eds.) *The principle of provenance. Report from the first Stockholm conference on archival theory and the principle of provenance* (Stockholm, 1994), 51–63.
- ³¹ See also M. Pugh, 'The illusion of omniscience: Subject access and the reference archivist', *American Archivist* 45, no. 1 (1982), 33–44. Here esp. at 33–34.
- ³² An early but still impressive attempt to come to terms with the impact of the digital turn on archival theory and practice is H. A. Taylor, 'Transformation in the archives: technological adjustment or paradigm shift?', *Archivaria* 25 (1987), 12–28.
- ³³ Blouin and Rosenberg, *Processing the past*, 50–57.
- ³⁴ I. G. Anderson, 'Are you being served? Historians and the search for primary sources', *Archivaria* 58 (2004), 81–129; H. Tibbo, 'Primarily History'; A. J. Gilliland-Swetland, 'Popularizing the finding aid', *Journal of Internet Cataloging* 4 (2001), 199–225; E. Yakel, 'Encoded archival description: Are finding aids boundary spanners or barriers for users?', *Journal of Archival Organization* 2 (2004) 63–77; W. Duff and J. M. Cherry, 'Use of

- historical documents in a digital world: Comparisons with original materials and microfiche', *Information Research*, 6(1) (2000); Duff and C. A. Johnson, 'Accidentally found on purpose: Information-seeking behavior of historians in archives', *Library Quarterly* 72, no. 4 (2002), 472–96.
- ³⁵ Duff, B. Craig and Cherry, 'Historians' use of archival sources: Promises and pitfalls of the digital age', *The Public Historian* 24 (2004), 7–22.
- ³⁶ Johnson and Duff, 'Chatting up the archivist: Social capital and the archival researcher', *American Archivist* 68, no. 1 (2005), 113–29.
- ³⁷ Pugh, 'The illusion of omniscience', esp. 36.
- ³⁸ Pugh, 'The illusion of omniscience', 41.
- ³⁹ Johnson and Duff, 'Chatting up the archivist', esp. 119.
- ⁴⁰ Susan L. Malbin, 'The reference interview in archival literature', *College & Research Libraries*, 58(1) (1997), 69–80; Margaret Hedstrom, 'Archives, memory, and interfaces with the past', *Archival Science* 2 (2002), 21–43; R. V. Szary, 'Encoded finding aids as a transforming technology in archival reference Service', Szary, D. V. Pitti, and Duff, *Encoded archival description on the internet* (New York, 2001), 187–197; Duff et al., 'Historians' use of archival sources'.
- ⁴¹ Duff and Allyson Fox, '"You're a guide rather than an expert": archival reference from an archivist's point of view', *Journal of the Society of Archivists* 27, no. 2 (2006), 129–53.
- ⁴² Szary, 'Encoded finding aids', 196.
- ⁴³ Hedstrom, 'Archives, memory, and interfaces', 43.
- ⁴⁴ T. Cook, 'The archive(s) is a foreign country: historians, archivists, and the changing archival landscape', *American Archivist*, 74 (2001), 600–32. Here esp. at 605, 608, 611, 614.
- ⁴⁵ Blouin and Rosenberg, *Processing the past*, 213–215. Elizabeth Yakel and Deborah A. Torres' call for a comprehensive redirection of archival user education towards the imparting of what they call 'archival intelligence' – that is an understanding of archival principles, practices and institutions – could also be regarded as a measure to bridge the 'archival divide'. See Yakel and Torres, 'AI: archival intelligence and user expertise', *The American Archivist* (2003), 66, 51–78.
- ⁴⁶ Cook, 'Evidence, memory, identity, and community: four shifting archival paradigms', *Archival Science* (2012), 1–26. Here esp. 19.
- ⁴⁷ I. Huvila, 'Participatory archive: towards decentralised curation, radical user orientation, and broader contextualization of records management', *Archival Science* (2008) 8, 15–36; S. Anderson and R. Allen, 'Envisioning the Archival Commons', *American Archivist* 72, no. 2 (2009), 383–400.
- ⁴⁸ See Duff, 'Archival Mediation: in Digital and Physical Environments', Terry Eastwood and Heather MacNeil (eds), *Currents In Archival Thinking* (Santa Barbara, California, 2010), 115–135. Here esp. 131. See also Duff and Verne Harris, 'Stories and Names: Archival Description as Narrating Records and Constructing Meanings', *Archival Science* (2002), 263–285. Here esp. 276–277, 285. Duff and Harris show that archival description always has a subjective component. They urge archivists to come to terms with the reality of subjective story-telling in their descriptive work and to facilitate the emergence of sub- and counter-narratives.
- ⁴⁹ Huvila, 'Participatory archive', 15.
- ⁵⁰ Cook, 'Evidence, memory, identity, and community', 1; Theo Thomassen, 'Turning archival thinking upside down. Archival theory and the use of databases,' Paper presented at the II Encontro de bases de dados sobre informações arquivísticas / Second Meeting of Databases about Archival Information, Rio de Janeiro, 15–16 March 2007.